FY23 Coastal Resilience Grant Program



Pre-RFR Information and Successful Project Examples



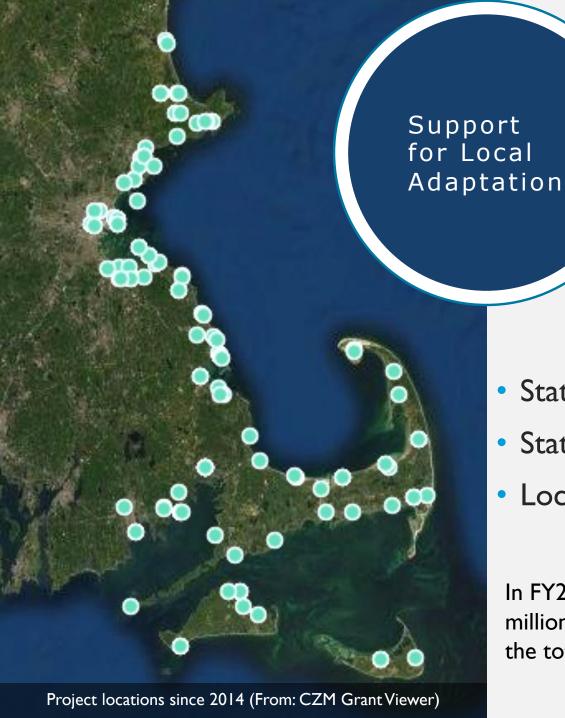
- Introductions
- Grant Program
  - Goals
  - Applicant and Project Eligibility
  - Anticipated Timeline
- Highlighting Local Resilience Approaches
  - Planning, Outreach, Transparency: Climate Ready Boston
  - Environmental Justice considerations: Salem Resilient Together – The Point
  - Phasing projects and municipal/nonprofit partnerships: Duxbury Beach Reservation
  - Redesign and retrofit of vulnerable infrastructure: Mattapoisett water main
  - Relocation, natural restoration, and building public support: Brewster, Edgartown, Orleans retreat projects
- Q&A and Discussion of potential projects



## Goals:

- Address current coastal flooding and shoreline erosion issues
- Adapt to future climate conditions (Sea level rise, precipitation)
- Protect public facilities and infrastructure assets
- Provide broad public benefits and access





- Applications submitted: 292
- Applications funded: 174
- Competitiveness varies year to year

State funding requested: \$50 million

State funding awarded: \$25 million

Local match committed: \$11 million/

In FY22, applicants were able to request \$1 million/project. A minimum 25% match of the total project cost was required.

The grant program will be entering its 10<sup>th</sup> round!

## **Applicants:**

• 78 coastal cities and towns

• Nonprofits that own vulnerable coastal property that is open and accessible to the public



## **Project Types:**

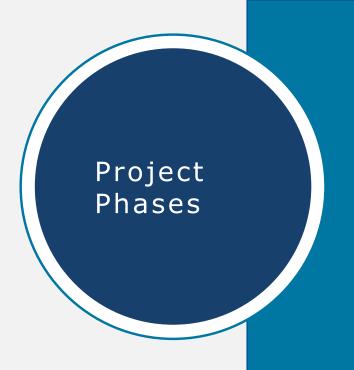
- I. Detailed Vulnerability and Risk Assessment
- 2. Public Education and Communication
- 3. Proactive Planning
- 4. Redesigns and Retrofits
- 5. Shoreline Restoration
  - Beach, berm, and dune building; coastal bank stabilization; fringing salt marsh enhancement



Planning, feasibility assessment, siting



Conceptual to Final Design





Permitting



Construction, Monitoring and Maintenance

## Anticipated FY23 Timeline

Milestone	Tentative Timeline
RFR released on CommBuys	April 2022
Q & A: Submit questions in writing; Q & A posted online	+ 2 weeks
Electronic applications due: coastal.resilience@mass.gov	May – June (+6 weeks from release)
Award announcement	July
Project scoping and contract execution	August – Sept.
Project start: Date of EEA's signature on your contract	August – Sept.
Project end	June 30, 2023; June 30, 2024 for 2-yr contracts



- Current vulnerability and management approach
- Climate impact and future vulnerability
- Need for assistance and Environmental Justice considerations
- Detailed project description \*
- Public benefit and interests
- Transferability
- Timeline \*
- Budget \*
- Project management and partners
- Overall project quality

\* Break down by task and fiscal year

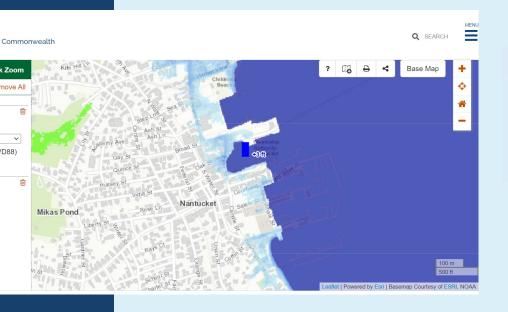
## Resources



CZM StormSmart Coasts Program

www.mass.gov/stormsmart-coasts-program

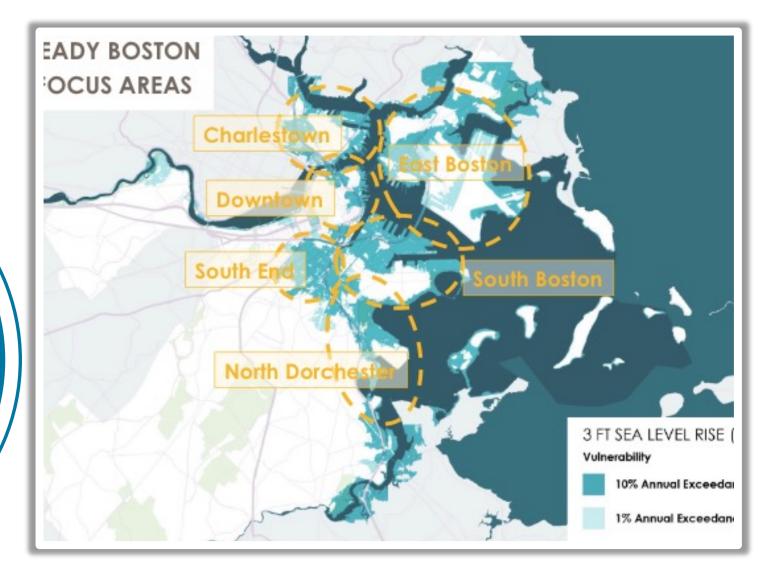
- MA Climate Change Clearinghouse <u>www.resilientma.org</u>
  - Downscaled climate change projections
- MA MyCoast <u>www.mycoast.org/ma</u>
  - Reports and photos of storm impacts



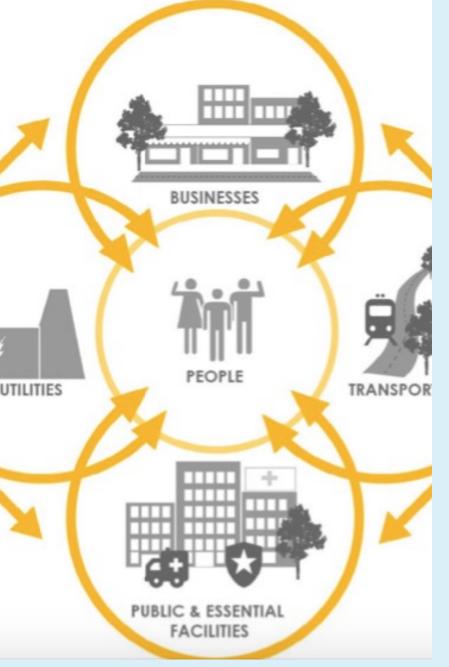
Sea level rise

A to 10.5 feet
by 2100

Climate Ready Boston

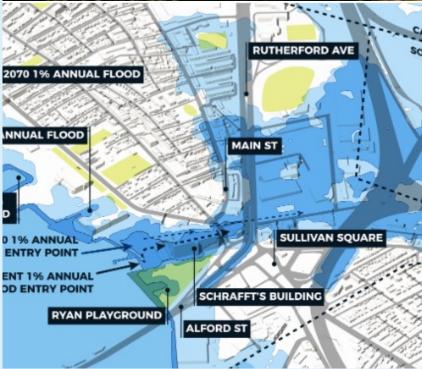


- Building consensus on climate projections and vulnerabilities
- Layered approach to resilience initiatives
- Robust stakeholder outreach and engagement
- Transparent planning and website resources



FY16 – Raising awareness, stakeholder interviews, city-wide assessment





FY17 – Advancing recommendations in East Boston and Charlestown

ducational opportunities

wild gardens Beer ga

Harbor Walk

pkeep Harbor Walk

an wilds Continunity

Water access People of co

Lots of lighting History



FY21 – Technical Analysis and Design Development in East Boston (Carlton Wharf-Lewis Mall)

#### Charlestown

#### Grant Information

Grant Program: Coastal Resilience Grantee: Boston

Project Title: Boston Climate Preparedness

Planning Initiative Grant Award: \$350,000

Year: 2016

Category: Planning & Outreach

Project Description: The city will review and develop consensus on local climate change projections and impacts, identify vulnerabilities and develop an initial porti of actions to strengthen the resiliency of buildings, neighborhoods and infrastructu

Grantee Type: Municipal Town or Region: Boston Watershed: Boston Harbor

URL: https://www.boston.gov/departme

Zoom to

## **Deliverables, Progress, and Resources**

### Climate Ready Downtown and North End

We released coastal resilience solutions to protect the Downtown/North End from coastal flooding.

## Climate Ready East Boston

We're beginning Phase II resilience planning for East Boston.

### Climate Ready Charlestown

We're beginning Phase II of resilience planning for Charlestown.



### Climate Ready South Boston

Read the report on coastal resilience strategies across the



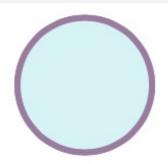
### Moakley Park Vision Plan

We're working with the Parks Department on a redesigned, resilient Moakley.



### Climate Ready Dorchester

We released a coastal resilience solutions report for protecting Dorchester from coastal flooding.

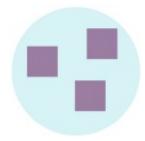


# Protected Shores Interventions to prevent harbor flooding; protect against storm surge; minimize upland wave zones; and raise coastal edge elevations

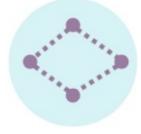


Resilient Infrastructure

Modification of existing infrastructure or creation of new infrastructure to allow effective functioning under future climate conditions.



Adapted Buildings
Efforts to retrofit existing
buildings to be more
resilient or to build
resilient new buildings



Prepared & Connected Communities Planning efforts and operational protocols that increase communities', facilities', and institutions' ability to thrive under future climate conditions.

#### **CLIMATE READY BOSTON PROGRESS**

This tool identifies our progress in putting in place the 5 layers, 11 strategies, and 39 initiatives recommended in the Climate Ready Boston Outline of Actions. We'll continue to update this page, which includes a summary graphic and details on progress for each initiative in a table format.

Across the City, we recognize the importance of tracking our progress and being transparent. This tool is the first iteration to improve those efforts in climate resiliency.

#### PROGRESS SUMMARY



## SALEM CLIMATE CHANGE DEEP DIVE MODEL ALTERNATIVES ANALYSIS AND TARGETED OUTREACH AND

**ENGAGEMENT PROJECT** 

Resilient Together: The Point

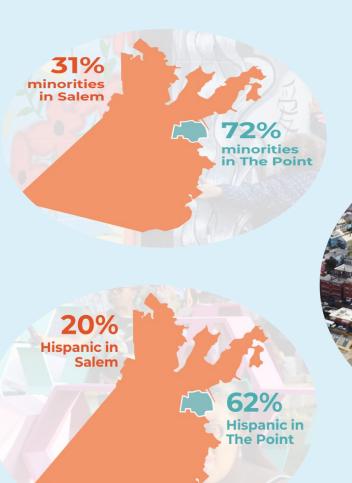
¡PRESERVEMOS EL PUNTO, TODOS JUNTOS!



The Point has been designated as an **Environmental Justice community** by the State. This is because of the history of systemic injustices affecting people of color, people speaking languages other than English, and people with low incomes. **Climate change disproportionately impacts neighborhoods like this.** 

El Punto ha sido designado por el estado como una <u>comunidad de Justicia Ambiental</u>. Esto se debe a la historia de injusticias sistémicas que afectan a las personas de color, las personas que hablan idiomas distintos del inglés y las personas con bajos ingresos. El cambio climático afecta desproporcionadamente a vecindarios como este.

A **diverse** community
Una comunidad diversa



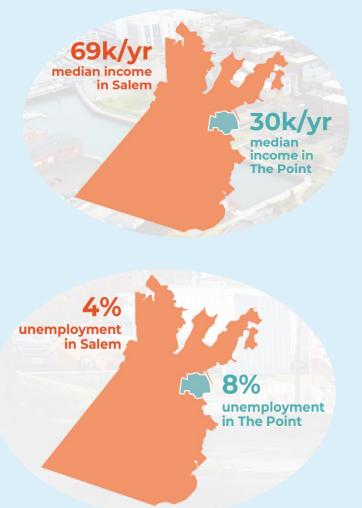
A strong **Hispanic community**Una comunidad hispana fuerte

A walkable and **dense neighborhood**Un vecindario caminable y denso



A community of **renters**Una comunidad de arrendatarios

A community facing **income inequalities**Una comunidad que enfrenta desigualdad
de ingresos



A community with **larger unemployment rates**Una comunidad con tasas de desempleo grandes

The City prioritized planning in The Point for the following reasons:

#### Challenges

- Already at risk from flooding and extreme heat
- Climate change will make these hazards more frequent and severe
- People's health, finances, housing, infrastructure, and environment will be more impacted

La Ciudad está priorizando la planeación de El Punto por las siguientes razones:

#### **Retos:**

- El Punto ya está en riesgo de inundación y calor extremo
- El cambio climático hará más frecuentes y severos estos fenómenos
- La salud, estabilidad económica, hogares, infraestructura y ambiente de la gente serán lo más affectado.

Residents are **more vulnerable** to flooding and extreme heat.

Residents face greater dangers to health and economic wellbeing.

Residents **need more resources** to prepare for, respond to, and recover from climate change impacts.

Los residentes son **más vulnerables** a las inundaciones y al calor extremo.

Los residentes enfrentan mayores peligros para la salud y el bienestar económico.

Los residentes **necesitan más recursos** para prepararse, responder y recuperarse de los impactos del cambio climático.

## **Project Strengths:**

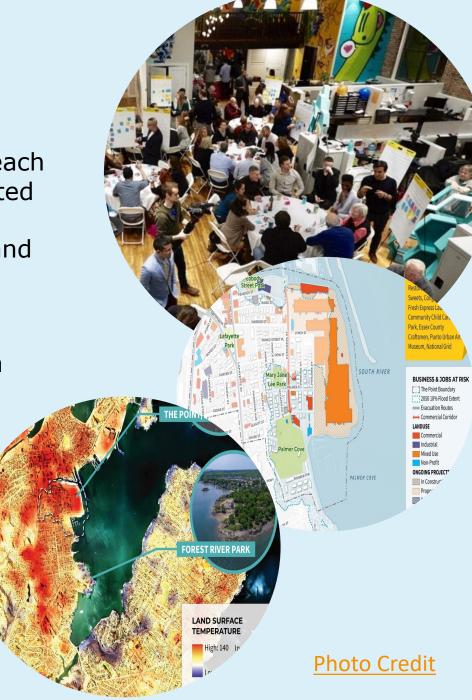
 Extensive targeted outreach to members of the affected community

 Bilingual presentations and outreach materials

Facilitated interactive workshops maximize stakeholder participation

Best available data and information

Dedicated city staff



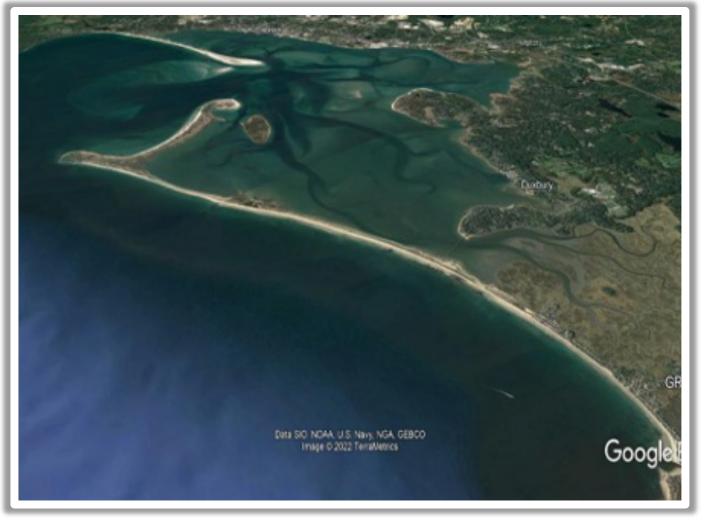
## **Duxbury Beach Nature Based Resiliency**

**Initiatives** 

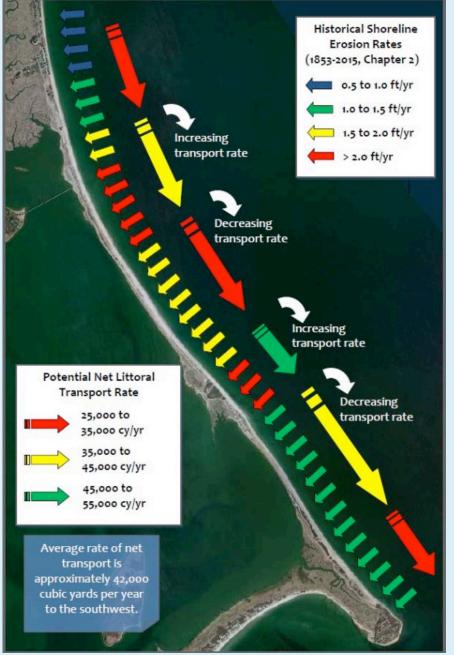
501(c)(3)

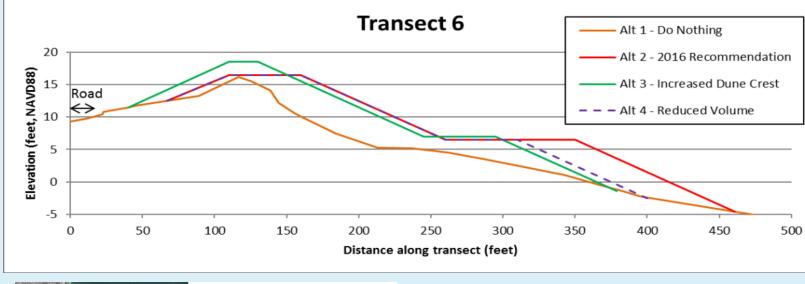
Utilizing a phased project approach

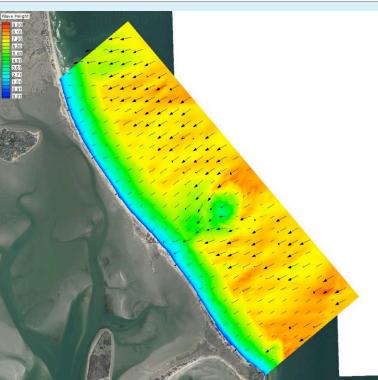
Strong partnerships with neighboring communities



- 2014 Cobble Berm Restoration and Construction of Native Beach Grass Nurseries \$86,947
- 2015 Coastal Processes Study for Duxbury Beach and Bay (with the Town of Duxbury) \$206,250
- 2018 Duxbury Beach Dune Restoration Design Project \$36,340
- 2019 Duxbury Beach Dune Restoration Implementation Project \$500,000
- 2020 Design and Permitting for Nature-Based Storm-Damage Protection \$131,894







Beach Nourishment Design (top) and Wave Modeling (bottom)



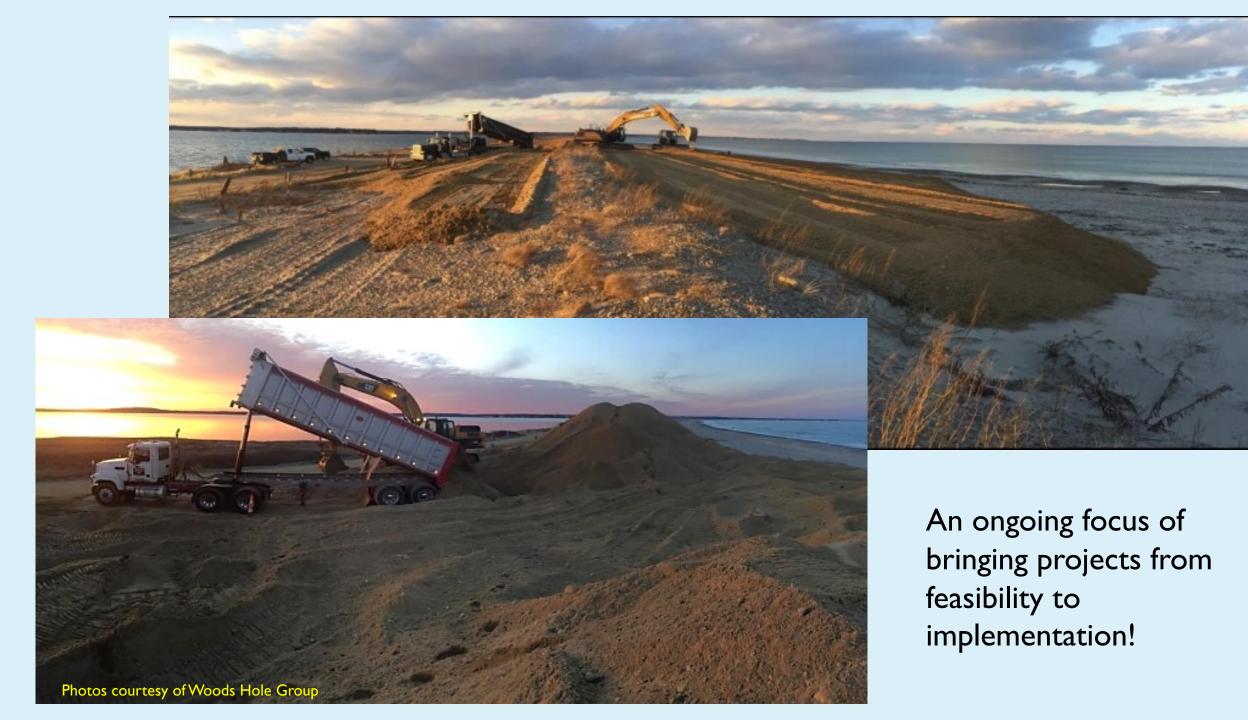
Topographic survey transects in the vicinity of the bayside erosional area



significant cobble component.

Cobble Beach Nourishment Footprint

Littoral Drift Investigation

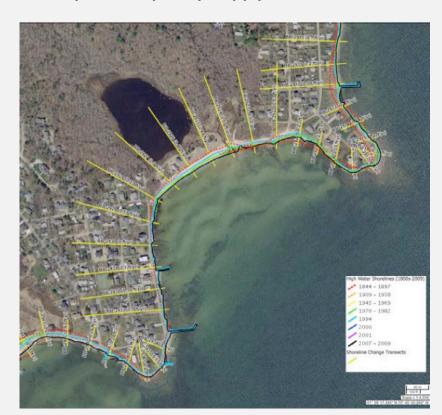


## Mattapoisett Pease's Point Water Main Relocation Project



- Asbestos cement water main had been exposed and damaged during a storm in June of 2013 on the Pease Point Barrier Beach.
- The main was taken out of service which limited the Towns ability to adequately supply water to the area.

- In FY17 the Town of Mattapoisett and its consultant applied For CZM Coastal Resilience Grant funding to:
  - Model storm surge and sea level rise;
  - Perform an assessment of potential beach/dune erosion;
  - Perform and engineering evaluation to develop relocation options;
  - Create a technical Report and perform public outreach.

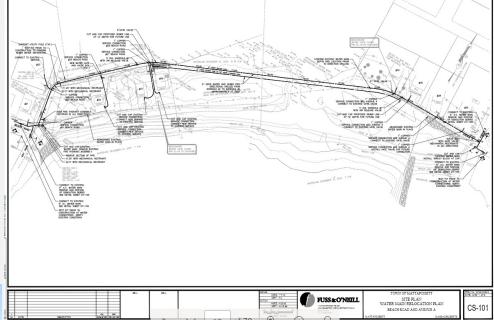


Redesign and Retrofit of Vulnerable Coastal Infrastructure



## Mattapoisett Pease's Point Water Main Relocation Project

In FY18 The Town of Mattapoisett applied for an additional Coastal Resilience grant to perform a final design and permit the relocation of the water main further from the shoreline.





In FY19 a third Coastal Resilience grant funded the relocation of the water main utilizing horizontal directional drilling (HDD) to install 1,400 linear feet of water main to a depth of 12 feet below surface grade. The water main was reactivated on June 4th, 2019.

## **Breakwater Beach Parking Lot Relocation**

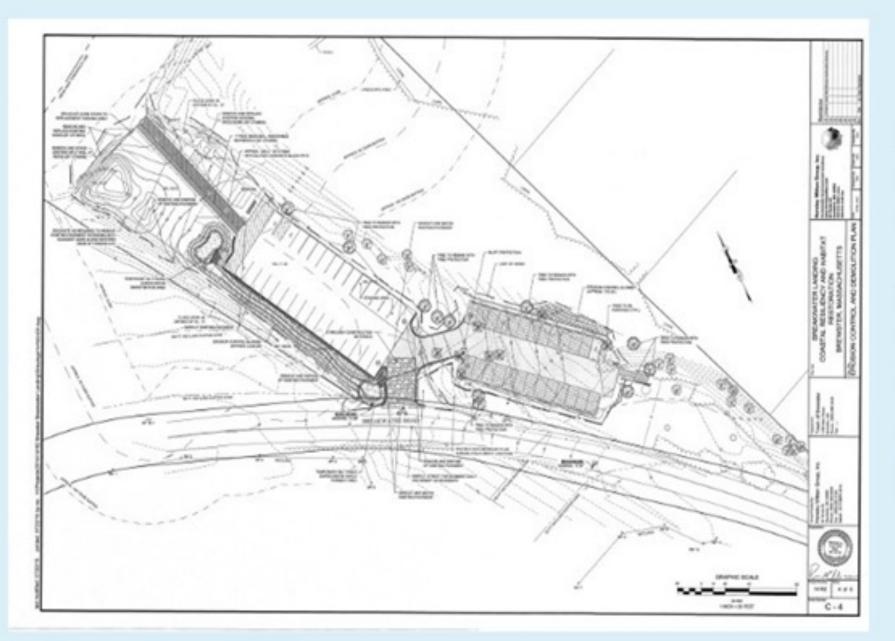
2014 CR Project \$155K

Relocate 30 parking spaces

Restore Coastal Dune

Stormwater Treatmen





New 30 space parking area located landward of existing parking lot

Remove 140' of asphalt and restore coastal dune

Install stormwater infrastructure



## **SAVE BREAKWATER**

## Petitioners seek special town meeting

or place has send and other extraga-

By Rich Eldred and a property of the second second

BREWSTER - Town meetings are so much fem. more citizens think twice a pear isn't emorgh and they've drawn up a petition for a

Actually it's not so much for the joy of each other's company but to stop the town's Breakwater Brack parking plan and to peak the selectmen to revise the entire. process of planning their varions beach projects. An guest communitary in today's paper (see Page A05) logs out the extremale for the citizen's petition but the actual mechanics are complex and in fire.

Two-bundred signatures of registered Brewster voters teropoles a they set beninger you nown meeting. They could be recented to the selectores at donday's meeting. Brewster hen has at slays to call a sperial town meeting. The goal of the petitioners is to have

meat. Work would begin Sept. S. and end by Nov. 30. Budders have until 2 p.m. Aug. 10 to rebeat their bids. That start date gives petitioners a shoot wandow to get the regustures in - July 25 at the

"Our concerns is they might start work in September," noted John Lient, one of the pensioners. "I'd like to give the town (people) the opportunity to expense their view before that happens. There are a lot of people getting eignstores but one possibility I'd like to float is that if the town agrees to be housed by the article till town morning [the petition] reight he delayed, but they'd have to agree not to start the firesh-

of swaes to me," declared Town Administrator Charles Named "We represent the interest of the whole community and we do have some time lines we need to take place by edict and energy reduce flooding. deal with if we just agree to true order and that's what's int the opportunity to hose healing out an olive branch attorium on town projects

The boan to moving about with place to charge the parking arms at five-standar finach, daupits story citizens

and it suplers on Dec. 31. go to such extremes." Which must be completed than pene A Nevember sote could providedo that.

"That doesn't make a lot the public to how a say on the controversial propert.

> tions of programment," segued. Not all construction should

The Breakwater plan went through public discussion before several boards and The petitioners also want meighbors aired their complacers. It was also appealed before the Department of Wa're a town meeting Environmental Protection who agreed with the town perpensive Peter Herrengens, that the artificial done would protect countal resources and

in mosting price to may work a most marginal of the apparent of the position o

Access Plan' is adopted by various town boards. Any new beach scress project. would require town marring. appropriate Resources terminist the an online mercey as well as studying different options all paragrapherhol by \$100,000

Lamb conceded parts of the article were non-binding.

"The idea is to present the sentiment of the town and if the community votes for It then there is senteneed to comply with that to represent the people, he said. It's more of a moral obligation not an effort to us the town in Gegal): knote. We want to engage in a resoperative effort. We aboutdn't be fighting each other in town.

Sommer said the bade could remain unopened, usual just prior to (a September) town meeting, of the petition in

"That way there is a window of opportunity so. even with the time line we could delay awarding the bad

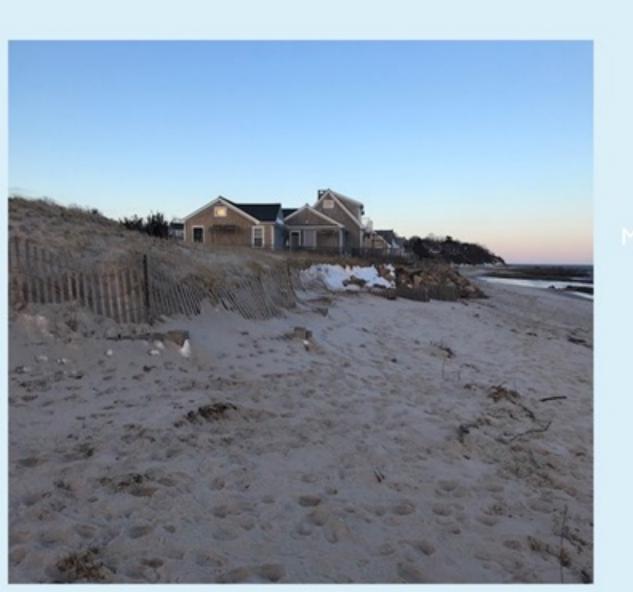


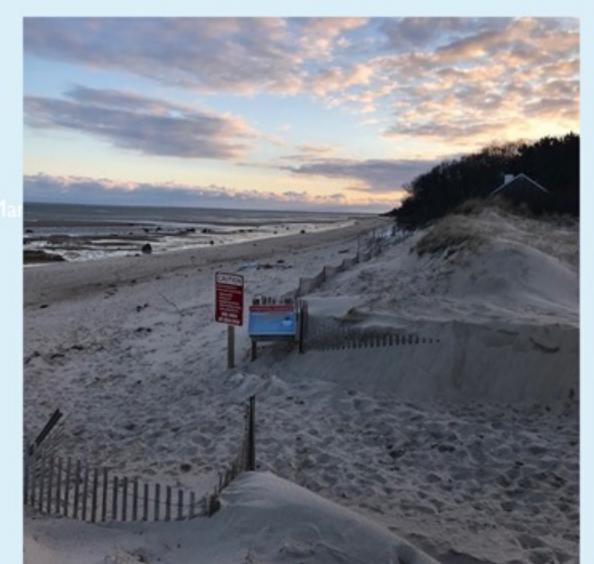






## March 16, 2018









# Edgartown & Trustees of Reservation Bath House Relocation and Dune Restoration Project

2022 CR Project \$240K

Public/Non-profit Partnership

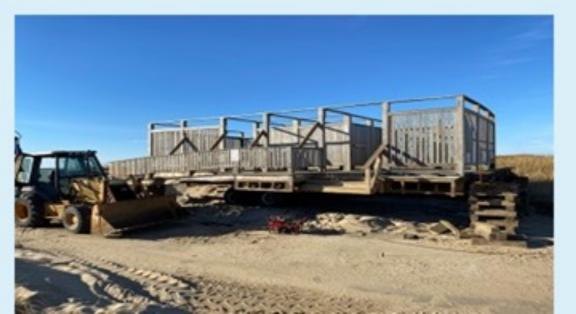
Nature Based Implementation Project



2021 - Town of Edgartown - Phase I, Project Design \$43,349

2022 - Town of Edgartown & Trustees of Reservation, Permitting & Implementation \$240K



















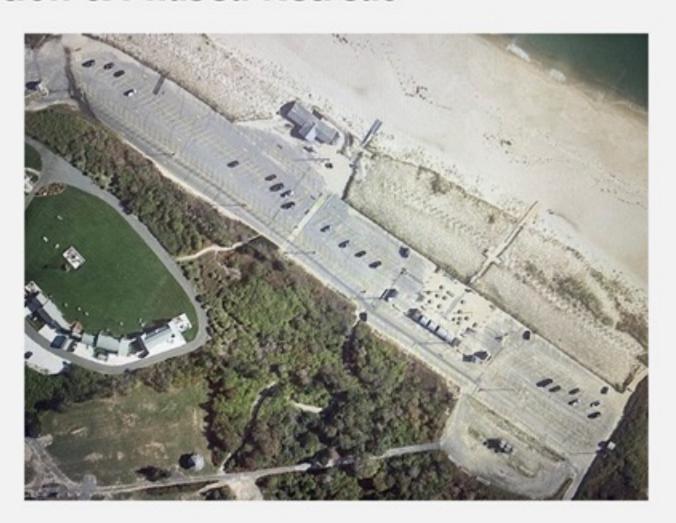


## Orleans - Nauset Beach Parking Lot Relocation & Phased Retreat

2022 CR Project \$1,000,000

Adaptive Management & Planned Retreat

Largest CZM CR Grant Award







- Provide meaningful and accessible opportunities for stakeholder engagement
- Enable an open and transparent process
- Develop transferable communication products that are accessible to all residents
- Plan comprehensively, implement sequentially
- Phase complex projects over time
- Address critical, short-term risks while planning for long-term adaptation



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